



QUARTERLY REPORT

Naval Postgraduate School

Spring Quarter 2005

CNO Speaks at NPS Spring Quarter Commencement Ceremony

On June 17, 2005, 283 students received their diplomas in NPS' King Hall auditorium. In addition to graduates from four armed services, 65 Department of Defense civilians and 51 international students from 26 countries including the first graduate from Papua New Guinea marked the completion of their courses.

The ceremony's special guest speaker was Chief of Naval Operations, Adm. Vern Clark.

Of the 275 master's degree students, eight received dual degrees. Sixty graduates completed the Joint Professional Military Education course -- 54 Navy, four Air Force and two Marine Corps officers. There were also two PhDs and five bachelor's degrees awarded.

International students represented 26 countries spanning the globe, including students from Botswana, Canada, Ecuador, France, Germany, Greece, Hungary, Jamaica, Moldova, India, El Salvador, Japan, Lithuania, Mexico, Mongolia, Morocco, Norway, Pakistan, Singapore, Taiwan, Turkey, the Dominican Republic, the Republic of Georgia, Indonesia, Ukraine and Papua New Guinea.



(U.S. Navy photo by Photographer's Mate 2nd Class Mike DiFranco)

Highlighting Naval Postgraduate School Students / Faculty

Maritime Domain Protection

The Meyer Institute of System Engineering & Analysis 7th cohort (SEA-7) consisted of 21 NPS students from a variety of backgrounds, including 13 US Navy, 1 US Army, 2 US civilian (Northrop-Grumman), 2 Turkish Air Force, 1 Singapore Defense Science & Technology Agency, 1 Argentinean Army, and 1 Mexican Navy.

The study focused on large ship and port security in the Port of Singapore and the nearby Straits of Malacca. The SEA team also designed and assessed ship inspection architecture alternatives for detecting explosive and dangerous materials in order to prevent a large cargo ship from being used as a terrorist vehicle.

The SEA-7 cohort began work on the cross-campus Integrated Project in October 2004 and gave their final presentation on June 1, 2005. SEA-7 was joined by 26 students from Singapore's Temasek Defense System Institute (TDSI) in January 2005. These students arrived at NPS following a six-month course of study in Singapore, and will continue work on individual theses following their participation in the SEA-7 Integrated Study, in order to graduate in December 2005.

Significant Navy Student Theses

Lt. John Rios, former Chief Engineer of USS CHIEF, one of two tactical action officers, completed his thesis 'Naval Mines in the 21st Century: Can NATO Navies Meet the Challenge?' Lt. Rios' thesis analyzes the mine threat (particularly the proliferation of advanced mine technologies and the potential of these technologies to be utilized by both state and non-state actors to disrupt shipping/naval operations) in relation to the capabilities currently being utilized and under development by NATO to meet the threat.

Lt. Cmdr. Glenn Walt, former Squadron pilot/Department Head of VAW-113 onboard USS ABRAHAM LINCOLN, completed his thesis 'Commander Naval Air Forces Flight Hour Program: Budgeting and Execution Response to the

Implementation of the Fleet Response Plan and OP-20 Pricing Model Changes.' Lt. Cmdr. Walt's thesis will assist OPNAV in attempting to better match flight hour funding requirements with a more dynamic and uncertain level of global operations. i.e. OEF and OIF.

Cmdr. Jerry Stokes, former Squadron Operations Officer of VAW-115 onboard USS KITTY HAWK deployed to Arabian Gulf, completed his thesis 'An Ultracapacitor Based Energy Storage System for an Electromagnetic Aircraft Launch System (EMALS).' Cmdr. Stokes' thesis discusses EMALS installed in CVN-21 Class carriers; enabling shipboard catapult launch of MQ-1 Predator UAV (other UAVs are also candidates); benefit is strong probability of 30% reduced catapult manning.

Conrad Scholars

On 9 June, three Conrad Scholars from NPS presented their theses to ASN(FM&C), acting FMB and staff, and Dir. Navy Staff (Vice Adm. Tom Church). The three theses were presented by Lt. Jason Miller - *Analysis of Sea Enterprise Program*; Lt Cmdr. Pam Theorgood - *Model Process Validation: An Analysis of Performance-based Pricing Models*; and Cmdr. Ron Arnold - *Useful Performance Metrics for PEO for Integrated Warfare Systems 1.0 and 2.0*.

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NPS Provides Global Support

Worldwide Education Outreach (Short Courses)

The Center for Civil Military Relations (CCMR) held 52 events during this quarter, both in Monterey and in other countries, reaching over 2,800 civilians and military officers from 46 nations.

Civil-Military Relations (CMR) Programs

In May, CCMR conducted two extremely successful METs in Ulaanbaatar, Mongolia and Bucharest, Romania.

In addition, CCMR conducted a civil-military relations seminar in Ouagadougou, Burkina Faso from 25-29 April, for 32 military and 25 civilians, focusing on civil-military relations in transitional societies.

Combating Terrorism Program

The Civil-Military Responses to Terrorism Resident Course (23 May-4 June) brought together 28 military officers and civilian officials from Colombia, Romania, Azerbaijan, Turkey, Brazil, Ecuador, Mongolia, Sri Lanka, Nepal, Bulgaria, Malaysia, Guatemala, Kenya, Indonesia, Jordan, Bosnia, Malta, El Salvador, Yemen, Tanzania, Pakistan to consider how governments can more effectively prevent terrorism and respond to it when they cannot.

Enhanced International Peacekeeping Capabilities (EIPC)

From 25-29 April, CCMR educated 30 participants of Ukraine's 95th Brigade or subordinate units, in Zhytomyr, Ukraine. The participants developed a first draft of a Brigade Mission Essential Task List (BDE METL).

International Defense Acquisition Resource Management (IDARM) Program

From 11-15 April, IDARM participated in a DSCA-led project on Force Modernization Priorities for Bulgaria's Ministry of Defense. From 20-24 June, IDARM conducted a conference on NATO's Black Sea Region Security.

Leader Development and Education for Sustained Peace Program (LDESP) Support

Iraq — The LDESP team conducted nine intensive seminars with more than 1,200 senior leaders prior to their deployments to Iraq. Training was conducted in Colorado, Mississippi, Texas, California and Indiana.

Afghanistan — From 17-22 April and 25-27 June, the LDESP team traveled to Camp Shelby, Mississippi to prepare 250 senior leaders from the 53rd BCT, Florida Army National Guard for Afghanistan.

KFOR — From 12-16 June, 100 senior leader from the Texas 36th.



Executive Director of Defense Resources Management Institute, Prof. C.J. Lacivita (far right) and a group of Turkish Army Officers. (U.S. Navy Photo by Javier Chagoya)

NPS Research

A research initiative focusing on future network centric operations took a major step forward with a "launch symposium" in May. The NPS research project — an open consortium called the World Wide Consortium on the Grid (W2COG) — will address the major technical and organizational challenges facing developers of the DOD Grid, the future global networking system that will support network centric operations.

Marine Corps Captains, Bret Hyla and Adrian Arnold, attended the Network Centric Operations Industry Consortium. The students were invited to describe their hands-on field experience and their views of current information system interoperability's strengths and weaknesses.

In the Defense Analysis Department Air Force Maj. Angela Burth is working on a highly original thesis based on using military customer 'markets' to help shape the new W2COG network.

Marine Corps Capt. Dwayne Lancaster, an NPS C4I Curriculum student, is working with the W2COG and several industry partners to build a prototype Hastily Formed Networks Flyaway Kit to assist in rapid deployment of network communications during emergencies. NPS is assisting DoD to enhance collaboration and communications with NGO's, IO's, and UN Agencies with civil-military Humanitarian Assistance/Disaster Relief and Complex Humanitarian Emergencies.

Undersea Warfare News

The NPS Center for AUV Research participated in the 2005 AUV FEST 6-16 June at the Underwater Test Range at NUWC Keyport, Wash. This year's exercise demonstrated a new technology for small AUVs that are used for mine field reconnaissance and neutralization. The new technology uses a low power and cost "Blazed Array" forward look sonar to both detect and classify objects in the water column in front of these vehicles. Using the detection capability of this sonar, dynamic image processing is used to provide the autonomous vehicle with avoidance decisions leading the vehicle to change its path and avoid collision. NPS faculty showed that dynamic image processing and closed loop detection and avoidance is both feasible and desirable. The exercise and the technology development were funded by ONR.

Five Naval students graduated with thesis topics related to this effort: Lt. Jason Grabelle, Ens. Daniel Hemminger, Ens. Alan R. Van Reet, Ens. Joel Gow and Ens. Kevin Michael Goering.

Center for Homeland Defense and Security

The DHS Homeland Security Advisory Council (HSAC) met April 25-26 at NPS with representatives from the private sector to review homeland security vulnerabilities and critical infrastructure protection.

The National Homeland Security Consortium Meeting was held May 24-25 at the Monterey Convention Center. Leaders from various agencies and national associations gathered to discuss topics such as HSPD-8, Bioterrorism Preparedness, and Cities Readiness Programs.

The CHDS Executive Education team, led by Ellen Gordon, conducted a MET as part of the meeting.

The 5th Homeland Security master's degree program class (31 students) started in May.

On April 25, CHDS conducted its first Major Urban Area MET seminar. The event was held in Seattle, Wash. for senior Homeland Security officials in the greater Seattle area region. In addition, there were ten METs conducted throughout the nation this quarter.

Students Aide TNT Research

The Tactical Network Topology research team conducted a new series of field experiments in May to enhance SOF warfighting capabilities and support GWOT efforts. Navy Lt. Shawn Johnson and Marine Corps Maj. Jeff Thiry created deployable network operations center. The field experiments have been sponsored by Congressional funds and Special Operations Command and have examined methods to: improve ability to find, fix, and identify enemy and equipment; reduce blue-on-blue incidents; design, develop and provide recommendations for integration of a tetherless transmit-receive link between soldiers, ground sensors, manned and unmanned vehicles; develop push-pull of secure data and video; and incorporate biometric-like software for identification of enemy and equipment. The 2005 team currently includes 22 thesis students and 31 faculty members from seven NPS academic departments, the MOVES and Meyer institutes and CIRPAS. Other collaborators include Lawrence Livermore National Lab, MIT, Virginia Tech, and several partnering companies.

NPS Supports the Fleet

Prof. Brian Swanland executed the first half of the USS NIMITZ's RSEP during its transit from San Diego to Hawaii, May 8 to May 17. Focus was on China and Korea. The second half will be conducted later in their deployment and focus on the Mid-East.

On May 4-13, Prof. Jim Wirtz and Prof. Mike Malley conducted an RSEP event for CARAT '05 (Cooperation Afloat Readiness and Training). It focused on Southeast Asia and the Asia-Pacific and involved Thailand, Singapore, Malaysia, Indonesia, Brunei and the Philippines and involved six United States Ships.

Distinguished Visitors and Major Conferences

28 Mar-8 Apr	Information Professional Senior Officer Course (CEE)	18-19 May	2 nd Annual Research Symposium, Honorable John J. Young, Jr. Assistant Secretary of the Navy for Research, Development and Acquisition; Rear Adm. Charles Hamilton, Program Executive Officer for Ships
31 Mar-1 Apr	The Honorable Ryan Henry Principal Deputy Under Secretary of Defense for Policy		
6-7 Apr	Anita K. Blair, Deputy Assistant Secretary of the Navy (Military Personnel Policy)	31-1 June	Mr. John Chapla U.S. House Armed Services Committee
11-12 Apr	Brig. Gen. Steven D. Saunders, USA Director, Joint Doctrine, Training and Force Development		
19-22 Apr	Adm. (Ret) James D. Watkins, USN, Chair of U.S. Commission on Ocean Policy and former CNO, NPS Hall of Fame Induction, Bldg. Naming & SGL (<i>below</i>)		



20-21 Apr	NPS Board of Advisors Meeting	6 June	Honorable Leon Panetta, Former Senators Alan Simpson (WY) and William Bradley (NJ) (<i>above</i>)
20-21 Apr	Pakistan National Defense College	7-8 June	Dr P.C. Lui, Singapore Ministry of Defense
25 Apr	Homeland Security Advisory Council Critical Infrastructure Task Force (CITF) Meeting	7-15 June	Executive Business Course Vice Adm. Donald Arthur Medical Corps Surgeon General, Chief, BUMED (<i>below</i>)
27 Apr	Brig. Gen. Volker Zimmer Commander German Armed Forces Command		
28-30 Apr	Rear Adm. Dan Mastagni Deputy CDR, Fleet Air Force Mediterranean		
3-5 May	Joint Electronic Warfare Conference		
13 May	Mr. Terry Halversen Executive Director for the Navy Personnel Development Command	8-10 June:	Rear Adm. Jacob Shuford President, Naval War College
15-20 May	Rear Adm. James Johnson Regional Director, TRICARE Regional Office-West	13-16 June	2 nd Annual Navy Higher Education IT Consortium Conference Vice Adm. Rodney Rempt, Superintendent of the U.S. Naval Academy
17 May	Mr. Jim Knox DoN CIO Knowledge Management Director	17 June	Adm. Vern Clark, CNO Graduation Speaker



NPS Recognizes Outstanding Students and Faculty

Student Awards



Monterey Council Navy League Award for Highest Academic Achievement; The Louis D. Liskin Award for Excellence in Business and Public Policy; Rear Admiral Thomas R. McClellan Award for Academic Excellence in the Graduate School of Business and Public Policy; Department of the Navy Award for Academic Excellence in Financial Management – Cmdr. Ronald Arnold, USN (*above, with Rear Adm. Patrick Dunne*)

Naval Postgraduate School Outstanding Academic Achievement Award for Department of Defense Students; Rear Admiral Grace Murray Hopper Computer Science Award - Mr. Ryan J. Noonan, Federal Cyber Corps

NPS Outstanding Academic Achievement Award for International Students – Lt. j.g. Dessalermos, Spyridon, Hellenic Navy

Naval Postgraduate School Superior Service Award – Cmdr. James A. Imanian, USN

Marine Corps Association Superior Service Award for Outstanding U.S. Marine Student – Capt. William Donnelly III, USMC

Air Force Association Award for Outstanding U.S. Air Force Student – Capt. Thomas Meer, USAF

Armed Forces Communications and Electronics Association Award - Mr. Tay, Yeong Kiang Winston, Singapore Ministry of Defense
Ens. Collier Crouch, USN

Army Chief of Staff Award for Excellence in Operations Research - Maj. Jeffrey B. House, USA

Military Operations Research Society Stephen A. Tisdale Graduate Research Award - Capt. Gary R. Kramlich, USA

Space and Naval Warfare Systems Command Award in Electronic Systems Engineering - Capt. Brian E. Souhan, USA

Naval Sea Systems Command Award for Excellence in Combat Systems - Lt. Christopher Lindberg, USNR

Conrad Scholar Award for Distinguished Academic Achievement in Financial Management - Cmdr. Ronald Arnold, USN, Lt. Cmdr. Pamela Theorgood, USN, and Lt. Jason Miller, USN

Joint Chiefs of Staff Command, Control and Communications Award for Academic Achievement - Capt. David D. Lancaster, USMC

Army Acquisition Corps Award for Scholastic Achievement - Maj. Steven R. Ansley, USN

The Surface Navy Association's Award for Excellence in Surface Warfare Research - Lt. Sean Niles, USN

2005 Warren Randolph Church Award for Excellence in Mathematics – Capt. Anthony Johnson, USA

Assistant Secretary of the Navy (Research, Development, and Acquisition) Acquisition Excellence Award - Lt. Cmdr. Brett M. Schwartz, USN

Graduate School of Business and Public Policy Faculty Outstanding International Student Award - Lt. j.g. Aykut Guducu, Turkish Navy

The Northrop Grumman Student Award for Excellence in Systems Engineering and Analysis - Maj. Russ Wylie, USA, Lt. Cmdr. Chris McCarthy, USN and, Lt. Col. Guillermo Ferraris, Argentinean Army

Meyer Award for Outstanding Student in Systems Engineering (Integrated Projects) - Hsu, Yu Chih and Chang, Kok Meng

Liskin Award for Excellence in Regional Security Studies – Maj. Douglas L. DeWitt, USMC

The Jim and Tina Heldman Award for Excellence in Regional or Security Studies - Lt. Col. Ekkehard Stemmer, German Air Force

The Outstanding United States Air Force Graduate Award, Department of National Security Affairs - Maj. Barry W. Cook, USAF and Maj. James D. McCune, USAF

Oceanographer of the Navy Award for Outstanding Academic Performance in Meteorology and Oceanography - Lt. Cmdr. Jacob C. Hinz, USN

The Graduate School of Business and Public Policy Award for Outstanding Leadership, Education, and Development - Capt. Joseph Groah, USMC and Lt. Francisco Alsina, USN

Meyer Award for Outstanding Student in Systems Engineering (Distance Learning) - Ms. Jennifer Escarez, Mr. Noel S. Camanag and Mr. Michael E. Edwards

Naval Supply Systems Command Award for Academic Excellence in Management; American Society of Military Comptrollers Award for Excellence in Research - Lt. Cmdr. Pamela Theorgood, USN (*below, with Dean Douglas Brook and Rear Adm. Patrick Dunne*)



Faculty Awards

Rear Admiral John Jay Schieffelin Award for Excellence in Teaching – Associate Professor Carlos Borges, Department of Mathematics

The Northrop Grumman Faculty Award for Excellence in Systems Engineering and Analysis - Professor Eugene Paulo and Capt. Thomas Hoivik, USN (Ret)

First Command Military Leadership Award – Cmdr. Mark Rhoades, USN

Meyer Award for Teaching Excellence in Systems Engineering (Integrated Projects) – Professor Ken Davidson, Department of Meteorology

The Lt. Cmdr. David L. Williams Outstanding Professor Award – Assistant Professor Aurel Croissant, NSA Department

The Louis D. Liskin Award for Teaching Excellence in the Graduate School of Business and Public Policy (GSBPP) - Associate Professor David Henderson